



SEQUENCE LISTING

<110> Berchtold, Peter
Escher, Robert F. A.

<120> ANTI-GPIIB/IIIA RECOMBINANT ANTIBODIES

<130> 100564-09049

<140> 09/424,840

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<150> DE 19820663.1

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<150> DE 19723904.8

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<160> 128

<170> PatentIn version 3.1

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<213> Homo sapiens

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Thr Leu Ser Leu Asn Cys Thr Val Ser Gly Arg Ser Ile Ser Gly Tyr	20 25 30	
tct tgg aga tgg atc cgg cag tct cca ggg aag gga cta gag tgg att		144
Ser Trp Arg Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile	35 40 45	
ggg gat atc tct tat agt ggg agt acc aag tac aaa ccc tcc ctc agg		192
Gly Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg	50 55 60	
agt cga gtc acc ctg tca gta gac acg tcc aag aac cag ttc tcc ctg		240
Ser Arg Val Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu	65 70 75 80	
aag ctg aat tcg gtg acc gct gcg gac acg gcc gtc tat tac tgt gcg		288
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala	85 90 95	
cga gtc ttg ccc ttt gac ccg atc tcg atg gac gtc tgg ggc aaa ggg		336
Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly	100 105 110	
acc acg gtc acc gtc tcc tca		357
Thr Thr Val Thr Val Ser Ser	115	

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35 40 45

Gly Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg
50 55 60

Ser Arg Val Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80

Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val Trp Gly Lys Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
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Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val
20 25 30

agc tgg tat cac cag gtc cca ggc acg gcc ccc aaa ctc ctc atc ttt 144
Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe
35 40 45

ggc agt cat cag cgg ccc tca ggg gtc cct gac cga ttc tct ggc tcc 192
Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
50 55 60

aag tcg ggc acc tcc gcc tcc ctg gcc atc cgt ggg ctc caa tct ggg 240
Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly
65 70 75 80

gat gct ggt gac tat tac tgt gca aca tgg gat gac ggc ctc aat ggt 288
Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly
85 90 95

ccg gtg ttc ggc gga ggg acc aag ctg acc gtc cta agt cag ccc
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 20 25 30

Ser Trp Tyr His Gln Val Pro Gly Thr Ala Pro Lys Leu Leu Ile Phe
 35 40 45

Gly Ser His Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
 50 55 60

Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Arg Gly Leu Gln Ser Gly
 65 70 75 80

Asp Ala Gly Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Gly Leu Asn Gly
 85 90 95

Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro
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 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 gct atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg 144
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 gca gtt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg 192
 Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
 50 55 60
 aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg ctg tat 240
 Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt 288
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 gcg aga gcg ctg ggg agc tgg ggg ggt tgg gac cac tac atg gac gtc 336
 Ala Arg Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
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 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr

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 Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr
 35 40 45
 Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
 50 55 60
 Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu
 65 70 75 80
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 Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
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<210> 9
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 Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val His Pro Gly Gly
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asn Phe	20	25	30	
gcc atg agc tgg gtc cgc cag gct cca ggg aag ggg ctg gag tgg gtc				144
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val	35	40	45	
tca ggc att agt ggt ggt ggt ctt ttg aca cac tac gca gac tcc gtg				192
Ser Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val	50	55	60	
aag ggc cgg ttc acc atc tcc aga aac aat tcc agg aac act gta tac				240
Lys Gly Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr	65	70	75	80
cta caa atg aac agc ctg aga gcc gaa gac acg gcc gtg tat tat tgt				288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys	85	90	95	
gtg aga gat ctg ggc tat aga gta ctt tcg act ttt act ttt gat atc				336
Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile	100	105	110	
tgg ggc cag ggg aca aag gtc acc gtc tct tca				369
Trp Gly Gln Gly Thr Lys Val Thr Val Ser Ser	115	120		

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 35 40 45
 Ser Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
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85

90

95

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 100 105 110

Trp Gly Gln Gly Thr Lys Val Thr Val Ser Ser
 115 120

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acc atc tcc tgc act gga acc agc agt gct att ggg aat tat aac ttt 96
 Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe
 20 25 30

gtc ccc tgg tac caa cag cac cca ggc aaa gcc ccc aaa ctc atg att 144
 Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile
 35 40 45

tat gag ggc agt aag cgg ccc tca ggg gtt tct aat cgc ttc tct ggc 192
 Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly
 50 55 60

tcc aag tct ggc aac acg gcc tcc ctg aca atc tct ggg ctc cag gct 240
 Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala
 65 70 75 80

gag gac gag gct gag tat tac tgc tgc tca tat gtt cat agt agc act 288
 Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr
 85 90 95

aat tgg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt cag ccc 336
 Asn Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
 100 105 110

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120

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 1 5 10 15

Thr Ile Ser Cys Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe
 20 25 30

Val Pro Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Met Ile
 35 40 45

Tyr Glu Gly Ser Lys Arg Pro Ser Gly Val Ser Asn Arg Phe Ser Gly
 50 55 60

Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala
 65 70 75 80

Glu Asp Glu Ala Glu Tyr Tyr Cys Cys Ser Tyr Val His Ser Ser Thr
 85 90 95

Asn Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
 100 105 110

Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
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<210> 13

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 acc ctg tct ctc acc tgc act gtc tct gat gtc tcc atc aga agt cat 96
 Thr Leu Ser Leu Thr Cys Thr Val Ser Asp Val Ser Ile Arg Ser His
 20 25 30
 tac tgg agt tgg ctc cgg cag ccc cca ggg aag gga ctg gag tgg att 144
 Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 ggg ttt atc tat gac ggt gcg aga acc agg ttc aac ccc tcc ctc agg 192
 Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg
 50 55 60
 agt cga gtc tcc ctt tca atg gac cca tcc aag aag cag ttt tcc ctg 240
 Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu
 65 70 75 80
 aaa ctg ggg tct gtg acc gct gcg gac tcg gcc gtc tac tac tgt gcg 288
 Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala
 85 90 95
 aga gac gcg gat gga gat ggc ttc agc cca tac tac ttt ccc tac tgg 336
 Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp
 100 105 110
 ggc cag gga atc ccg gtc tcc gtc tcc tcg 366
 Gly Gln Gly Ile Pro Val Ser Val Ser Ser
 115 120

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 <213> Homo sapiens

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 20 25 30
 Tyr Trp Ser Trp Leu Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Gly Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg
 50 55 60

Ser Arg Val Ser Leu Ser Met Asp Pro Ser Lys Lys Gln Phe Ser Leu
65 70 75 80

Lys Leu Gly Ser Val Thr Ala Ala Asp Ser Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr Trp
100 105 110

Gly Gln Gly Ile Pro Val Ser Val Ser Ser
115 120

<210> 15

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<212> DNA

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tcc ctg aga ctc tcc tgt gca gcc tct gga ttc acc ttc agt agc tat		96
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr		
20 25 30		
act atg cac tgg gtc cgc cag gct cca ggc aag ggg ctg gag tgg gtg		144
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val		
35 40 45		
gca ctt ata tca tat gat gga agc aat aaa tac tac gca gac tcc gtg		192
Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val		
50 55 60		
aag ggc cga ttc gcc atc tcc aga gac aat tcc aag aac acg cta tat		240
Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr		
65 70 75 80		
ctg caa atg aac agc ctg aga gct gag gac acg gct gtg tat tac tgt		288
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys		
85 90 95		
gcg aaa gat ggc cgg agt ggg agc tac gcc agg ttc gac ggt atg gac		336
12		

Ala Lys Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp
 100 105 110

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 115 120

372

<210> 16

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<213> Homo sapiens

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Thr Met His Trp val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp val
 35 40 45

Ala Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser val
 50 55 60

Lys Gly Arg Phe Ala Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala val Tyr Tyr Cys
 85 90 95

Ala Lys Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp
 100 105 110

val trp gly gln gly thr thr val thr val ser ser
 115 120

<210> 17

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<212> DNA

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40

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 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95

Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
 100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
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acc ctg tcc ctc acc tgc act gtc tct ggt ggc tcc ttc agt act tac 96
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Phe Ser Thr Tyr
 20 25 30

tat tgg agc tgg atc cgg cag ccc cca ggg aag gga ctg gag tgg att 144
 Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45

ggg tat atc tat tac agt ggg aac acc aac tac aac ccc tcc ctc aag 192
 Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60

agt cga gcc acc ata tca gta gac acg tcc aag aac cag ttc tcc ctg 240
 Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80
 15

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Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala		
				85					90					95			
aga	ctg	cgt	aac	gat	ggc	tgg	aat	gat	ggc	ttt	gat	atc	tgg	ggc	caa		336
Arg	Leu	Arg	Asn	Asp	Gly	Trp	Asn	Asp	Gly	Phe	Asp	Ile	Trp	Gly	Gln		
			100					105					110				
ggg	aca	atg	gtc	acc	gtc	tct	tca										360
Gly	Thr	Met	Val	Thr	Val	Ser	Ser										
		115					120										

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 35 40 45
 Gly Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60
 Ser Arg Ala Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95
 Arg Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile Trp Gly Gln
 100 105 110
 Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 21
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Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
 50 55 60

Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Tyr
 65 70 75 80

Leu Gln Met Ser Thr Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
 100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115 120

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 Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
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tcg gtg atg gtc tcc tgc aag gct tct gga ggc acc ttc agc agc cat 96
 Ser Val Met Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser His
 20 25 30

act atc agc tgg gtg cgg cag gcc cct gga caa ggc ctt gag tgg atg 144
 Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

gga ggg atc acc cct atc ttt ggt aca gtg aac tac gca cag aag ttc Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe 50 55 60	192
cag ggc aga gtc acc att acc gcg gac gaa ccc acg agc aca gcc tac Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr 65 70 75 80	240
atg gaa ctg agg agc ctg aca tct gac gac tcg ggc atc tat tac tgt Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys 85 90 95	288
gcg aga gaa gat ggc act aca gta cca agt caa ccc ctt gag ttc tgg Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp 100 105 110	336
ggc cag gga acc cgg gtc acc gtc tcc tct Gly Gln Gly Thr Arg Val Thr Val Ser Ser 115 120	366

<210> 24

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<400> 24

Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
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20 25 30

Thr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Pro Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Asp Asp Ser Gly Ile Tyr Tyr Cys
85 90 95

Ala Arg Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe Trp
100 105 110

Gly Gln Gly Thr Arg Val Thr Val Ser Ser
115 120

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Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly		
1 5 10 15		
tcc ctg aga ctc tcc tgt tca gcc tct gga ttc acc ttc aat aaa tat		96
Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr		
20 25 30		
gca ata cac tgg gtc cgc cag gct cca ggg aag gga ctg gaa tat gtt		144
Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val		
35 40 45		
tca gct att agt agt aat ggg ggt aac aca tac tac gca gac tcc gtg		192
Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val		
50 55 60		
aag ggc aga ttc acc atc tcc aga gac aat tcc aag aac acg gtg tat		240
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr		
65 70 75 80		
ctt caa atg agc agt ctg aga gct gag gac acg gct gtg tat tac tgt		288
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys		
85 90 95		
gtt aga gga agt ggg agc tac tta gga tac tac ttt gac tac tgg ggc		336
Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly		
100 105 110		
cag gga acc ctg gtc acc gtc tcc tca		363
Gln Gly Thr Leu Val Thr Val Ser Ser		
115 120		

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<400> 26

Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asn Lys Tyr
20 25 30

Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
35 40 45

Ser Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Arg Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

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val val thr gln pro pro ser val ser val ala pro arg gln thr ala
1 5 10 15

acg att acc tgt ggg gga tac aag att gga agt aaa agt gtc cac tgg
21

48

96

Thr Ile Thr Cys Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His Trp
 20 25 30
 144
 tac caa cag aag cca ggc cag gcc cct gta ttg gtc gtc tat gag gat
 Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
 35 40 45
 192
 tcc tac cgg ccc tca gag atc cct gag cga ttc tct ggc tcc aac tct
 Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
 50 55 60
 240
 ggg aac atg gcc acc ctg acc atc acc ggg gtc gaa gcc ggg gat gag
 Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
 65 70 75 80
 288
 gcc gac tac tac tgt cag gtg tgg gat aat act aat gat cag acg ata
 Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
 85 90 95
 336
 ttc ggc gga ggg acc aag ctg acc gtc cta cgt cag ccc aag gct gcc
 Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
 100 105 110
 366
 ccc tcg gtc act ctg ttc ccg ccc tcc tct
 Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
 115 120

<210> 28

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<400> 28

Val Val Thr Gln Pro Pro Ser Val Ser Val Ala Pro Arg Gln Thr Ala
 1 5 10 15

Thr Ile Thr Cys Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His Trp
 20 25 30

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Val Tyr Glu Asp
 35 40 45

Ser Tyr Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
 50 55 60

Gly Asn Met Ala Thr Leu Thr Ile Thr Gly Val Glu Ala Gly Asp Glu
 65 70 75 80

Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Thr Asn Asp Gln Thr Ile
 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala
 100 105 110

Pro Ser Val Thr Leu Phe Pro Pro Ser Ser
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<210> 29

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Gln Val Lys Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala		
1 5 10 15		
tca gtg aag gtc tcc tgc aag gtt tcc gga tac acc ctc act gaa tta		96
Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu		
20 25 30		
tcc atg cac tgg gtg cga cag gct cct gga aaa ggg ctt gag tgg atg		144
Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met		
35 40 45		
gga ggt ttt gat cct gaa gat ggt gaa aca atc tac gca cag aaa ttc		192
Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe		
50 55 60		
cag ggc aga gtc acc atg acc gag gac aca tct aca gac acg gcc tac		240
Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr		
65 70 75 80		
atg gag ctg agc agc ctg aga tct gag gac acg gcc gtg tat tac tgt		288
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys		
85 90 95		
gag aca ggt ctg agg tcg tac aac tat ggt cgt aac ctt gac tat tgg		336
Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp		
100 105 110		
ggc cag gga acc ctg gtc acc gtc tcc tca		366
Gly Gln Gly Thr Leu Val Thr Val Ser Ser		
115 120		

<210> 30

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<213> Homo sapiens

<400> 30

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1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Leu Thr Glu Leu
20 25 30

Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Glu Asp Thr Ser Thr Asp Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Glu Thr Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

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<211> 11

<212> PRT

<213> Homo sapiens

<400> 31

Val Leu Pro Phe Asp Pro Ile Ser Met Asp Val
1 5 10

<210> 32

<211> 14

<212> PRT

<213> Homo sapiens

<400> 32

Ala Leu Gly Ser Trp Gly Gly Trp Asp His Tyr Met Asp Val
1 5 10

<210> 33

<211> 5

<212> PRT

<213> Homo sapiens

<400> 33

Gly Tyr Ser Trp Arg
1 5

<210> 34

<211> 5

<212> PRT

<213> Homo sapiens

<400> 34

Ser Tyr Ala Met His
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<210> 35

<211> 16

<212> PRT

<213> Homo sapiens

<400> 35

Asp Ile Ser Tyr Ser Gly Ser Thr Lys Tyr Lys Pro Ser Leu Arg Ser
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<210> 36

<211> 17

<212> PRT

<213> Homo sapiens

<400> 36

Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 37

<211> 11

<212> PRT

<213> Homo sapiens

<400> 37

Ala Thr Trp Asp Asp Gly Leu Asn Gly Pro Val
1 5 10

<210> 38

<211> 11

<212> PRT

<213> Homo sapiens

<400> 38

Ala Ala Trp Asp Asp Ser Leu Asn Gly Trp Val
1 5 10

<210> 39

<211> 13

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<400> 39

Ser Gly Ser Ser Ser Asn Ile Arg Ser Asn Pro Val Ser
1 5 10

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<211> 13

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<213> Homo sapiens

<400> 40

Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
1 5 10

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<213> Homo sapiens

<400> 41

Gly Ser His Gln Arg Pro Ser
1 5

<210> 42

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<400> 42

Ser Asn Asn Gln Arg Pro Ser
1 5

<210> 43

<211> 16

<212> PRT

<213> Homo sapiens

<400> 43

Val Arg Asp Leu Gly Tyr Arg Val Leu Ser Thr Phe Thr Phe Asp Ile
1 5 10 15

<210> 44

<211> 15

<212> PRT

<213> Homo sapiens

<400> 44

Asp Gly Arg Ser Gly Ser Tyr Ala Arg Phe Asp Gly Met Asp Val
1 5 10 15

<210> 45

<211> 14

<212> PRT

<213> Homo sapiens

<400> 45

Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp Ile
1 5 10

<210> 46

<211> 14

<212> PRT

<213> Homo sapiens

<400> 46

Asp Ala Asp Gly Asp Gly Phe Ser Pro Tyr Tyr Phe Pro Tyr
1 5 10

<210> 47

<211> 12

<212> PRT

<213> Homo sapiens

<400> 47

Leu Arg Asn Asp Gly Trp Asn Asp Gly Phe Asp Ile
1 5 10

<210> 48

<211> 14

<212> PRT

<213> Homo sapiens

<400> 48

Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
1 5 10

<210> 49

<211> 13

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<213> Homo sapiens

<400> 49

Glu Asp Gly Thr Thr Val Pro Ser Gln Pro Leu Glu Phe
1 5 10

<210> 50

<211> 12

<212> PRT

<213> Homo sapiens

<400> 50

Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr
1 5 10

<210> 51

<211> 13

<212> PRT

<213> Homo sapiens

<400> 51

Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr
1 5 10

<210> 52

<211> 9

<212> PRT

<213> Homo sapiens

<400> 52

Cys Ser Tyr Val His Ser Ser Thr Asn
1 5

<210> 53

<211> 9

<212> PRT

<213> Homo sapiens

<400> 53

Gln Val Trp Asp Asn Thr Asn Asp Gln
1 5

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Asn Phe Ala Met Ser
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Ser Tyr Thr Met His
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<210> 56

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<213> Homo sapiens

<400> 56

Asp Tyr Ala Leu His
1 5

<210> 57

<211> 5

<212> PRT

<213> Homo sapiens

<400> 57

Ser His Tyr Trp Ser
1 5

<210> 58

<211> 5

<212> PRT

<213> Homo sapiens

<400> 58

Thr Tyr Tyr Trp Ser
1 5

<210> 59

<211> 5

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<213> Homo sapiens

<400> 59

Asp Tyr Gly Met His
1 5

<210> 60

<211> 5

<212> PRT

<213> Homo sapiens

<400> 60

Ser His Thr Ile Ser
1 5

<210> 61

<211> 5

<212> PRT

<213> Homo sapiens

<400> 61

Lys Tyr Ala Ile His
1 5

<210> 62

<211> 5

<212> PRT

<213> Homo sapiens

<400> 62

Glu Leu Ser Met His
1 5

<210> 63

<211> 17

<212> PRT

<213> Homo sapiens

<400> 63

Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 64

<211> 17

<212> PRT

<213> Homo sapiens

<400> 64

Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asn Ser Val Lys
1 5 10 15

Gly

<210> 65

<211> 17

<212> PRT

<213> Homo sapiens

<400> 65

Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 66

<211> 14

<212> PRT

<213> Homo sapiens

<400> 66

Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe Val Pro
1 5 10

<210> 67

<211> 11

<212> PRT

<213> Homo sapiens

<400> 67

Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His
1 5 10

<210> 68

<211> 7

<212> PRT

<213> Homo sapiens

<400> 68

Glu Gly Ser Lys Arg Pro Ser
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<210> 69

<211> 7

<212> PRT

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<400> 69

Glu Asp Ser Tyr Arg Pro Ser
1 5

<210> 70

<211> 17

<212> PRT

<213> Homo sapiens

<400> 70

Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 71

<211> 16

<212> PRT

<213> Homo sapiens

<400> 71

Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg Ser
1 5 10 15

<210> 72

<211> 17

<212> PRT

<213> Homo sapiens

<400> 72

Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 73

<211> 17

<212> PRT

<213> Homo sapiens

<400> 73

Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 74

<211> 17

<212> PRT

<213> Homo sapiens

<400> 74

Gly Ile Ser Gly Gly Gly Leu Leu Thr His Tyr Ala Asp Ser Val Lys
 1 5 10 15

Gly

<210> 75

<211> 30

<212> PRT

<213> Homo sapiens

<400> 75

Arg Phe Thr Ile Ser Arg Asn Asn Ser Arg Asn Thr Val Tyr Leu Gln
 1 5 10 15

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 20 25 30

<210> 76

<211> 17

<212> PRT

<213> Homo sapiens

<400> 76

Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asn Ser Val Lys
 1 5 10 15

Gly

<210> 77

<211> 17

<212> PRT

<213> Homo sapiens

<400> 77

Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
 1 5 10 15

Gly

<210> 78

<211> 17

<212> PRT

<213> Homo sapiens

<400> 78

Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 79

<211> 16

<212> PRT

<213> Homo sapiens

<400> 79

Phe Ile Tyr Asp Gly Ala Arg Thr Arg Phe Asn Pro Ser Leu Arg Ser
1 5 10 15

<210> 80

<211> 14

<212> PRT

<213> Homo sapiens

<400> 80

Thr Gly Thr Ser Ser Ala Ile Gly Asn Tyr Asn Phe Val Pro
1 5 10

<210> 81

<211> 7

<212> PRT

<213> Homo sapiens

<400> 81

Glu Gly Ser Lys Arg Pro Ser
1 5

<210> 82

<211> 9

<212> PRT

<213> Homo sapiens

<400> 82

Cys Ser Tyr Val His Ser Ser Thr Asn
1 5

<210> 83

<211> 5

<212> PRT

<213> Homo sapiens

<400> 83

Asp Tyr Gly Met His
1 5

<210> 84

<211> 17

<212> PRT

<213> Homo sapiens

<400> 84

Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 85

<211> 14

<212> PRT

<213> Homo sapiens

<400> 85

Asp Ser Glu Thr Ala Ile Ala Ala Ala Gly Arg Phe Asp Ile
1 5 10

<210> 86

<211> 5

<212> PRT

<213> Homo sapiens

<400> 86

Ser His Thr Ile Ser
1 5

<210> 87

<211> 17

<212> PRT

<213> Homo sapiens

<400> 87

Gly Ile Thr Pro Ile Phe Gly Thr Val Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 88

<211> 17

<212> PRT

<213> Homo sapiens

<400> 88

Ala Ile Ser Ser Asn Gly Gly Asn Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 89

<211> 12

<212> PRT

<213> Homo sapiens

<400> 89

Gly Ser Gly Ser Tyr Leu Gly Tyr Tyr Phe Asp Tyr
1 5 10

<210> 90

<211> 13

<212> PRT

<213> Homo sapiens

<400> 90

Gly Leu Arg Ser Tyr Asn Tyr Gly Arg Asn Leu Asp Tyr
1 5 10

<210> 91

<211> 5

<212> PRT

<213> Homo sapiens

<400> 91

Ser Tyr Ala Met His
1 5

<210> 92

<211> 5

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<400> 92

Ser Tyr Ala Ile Ser

1 5

<210> 93

<211> 5

<212> PRT

<213> Homo sapiens

<400> 93

Ser Tyr Gly Met His
1 5

<210> 94

<211> 5

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<213> Homo sapiens

<400> 94

Glu Leu Ser Met His
1 5

<210> 95

<211> 17

<212> PRT

<213> Homo sapiens

<400> 95

Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 96

<211> 17

<212> PRT

<213> Homo sapiens

<400> 96

Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 97

<211> 17

<212> PRT

<213> Homo sapiens

<400> 97

Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 98

<211> 17

<212> PRT

<213> Homo sapiens

<400> 98

Gly Phe Asp Pro Glu Asp Gly Glu Thr Ile Tyr Ala Gln Lys Phe Gln
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Gly

<210> 99

<211> 9

<212> PRT

<213> Homo sapiens

<400> 99

Gln Val Trp Asp Asn Thr Asn Asp Gln
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<210> 100

<211> 11

<212> PRT

<213> Homo sapiens

<400> 100

Gly Gly Asn Asn Ile Gly Ser Lys Ser Val His
1 5 10

<210> 101

<211> 7

<212> PRT

<213> Homo sapiens

<400> 101

Tyr Asp Ser Asp Arg Pro Ser
1 5

<210> 102

<211> 9

<212> PRT

<213> Homo sapiens

<400> 102

Gln Val Trp Asp Ser Ser Ser Asp His
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<210> 103

<211> 5

<212> PRT

<213> Homo sapiens

<400> 103

Ser Tyr Ala Met Ser
1 5

<210> 104

<211> 5

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<213> Homo sapiens

<400> 104

Ser Tyr Gly Met His
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<210> 105

<211> 5

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<400> 105

Asp Tyr Ala Met His
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<210> 106

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<400> 106

Ser Tyr Tyr Trp Ser
1 5

<210> 107

<211> 17

<212> PRT

<213> Homo sapiens

<400> 107

Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15
44

Gly

<210> 108

<211> 17

<212> PRT

<213> Homo sapiens

<400> 108

Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 109

<211> 17

<212> PRT

<213> Homo sapiens

<400> 109

Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 110

<211> 16

<212> PRT

<213> Homo sapiens

<400> 110

Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 111

<211> 17

<212> PRT

<213> Homo sapiens

<400> 111

Leu Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 112

<211> 16

<212> PRT

<213> Homo sapiens

<400> 112

Tyr Ile Tyr Tyr Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 113

<211> 17

<212> PRT

<213> Homo sapiens

<400> 113

Ala Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 114

<211> 17

<212> PRT

<213> Homo sapiens

<400> 114

Gly Ile Ser Trp Asp Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 115

<211> 11

<212> PRT

<213> Homo sapiens

<400> 115

Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His
1 5 10

<210> 116

<211> 7

<212> PRT

<213> Homo sapiens

<400> 116

Glu Asp Ser Tyr Arg Pro Ser
1 5

<210> 117

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Oligonucleotide

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18

<210> 118

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Oligonucleotide

<400> 118
ggccgcaaat tctatttcaa gg 22

<210> 119

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Oligonucleotide

<400> 119
gagacacacc agtgtggc 18

<210> 120

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Oligonucleotide

<400> 120
cacaacagag gcagttcc 18

<210> 121

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Oligonucleotide

<400> 121
ctaaactagc tagtctcc

<210> 122

<211> 11

<212> PRT

<213> Homo sapiens

<400> 122

Gly Gly Tyr Lys Ile Gly Ser Lys Ser Val His
1 5 10

<210> 123

<211> 124

<212> PRT

<213> Homo sapiens

<400> 123

Gln Val Lys Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

Ala Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Ser Trp Asp Ser Thr Ser Ile Gly Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
85 90 95

Val Lys Asp Met Gly Ser Ser Val Val Ala Thr Tyr Asn Ala Phe Asp
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 124

<211> 14

<212> PRT

<213> Homo sapiens

<400> 124

Thr Gly Thr Ser Ser Asp Val Gly Ser Tyr Asn Leu Val Ser
1 5 10

<210> 125

<211> 7

<212> PRT

<213> Homo sapiens

<400> 125

Glu Val Ser Lys Arg Pro Ser
1 5

<210> 126

<211> 9

<212> PRT

<213> Homo sapiens

<400> 126

Cys Ser Tyr Ala Gly Ser Ser Thr Phe
1 5

<210> 127

<211> 5

<212> PRT

<213> Homo sapiens

<400> 127

Lys Tyr Ala Ile His
1 5

<210> 128

<211> 7

<212> PRT

<213> Homo sapiens

<400> 128

Arg Asn Asn Gln Arg Pro Ser
1 5